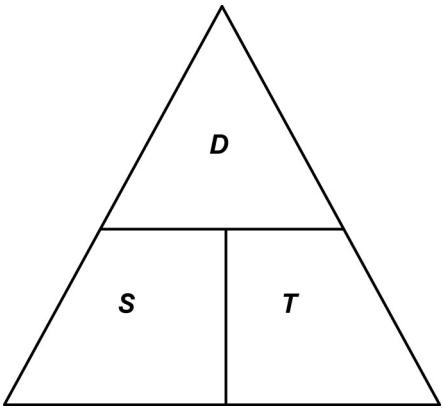
Name: _____ Date: _____

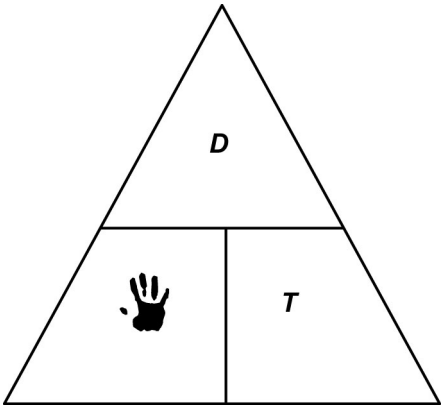
Student Success: Terrific Triangles



This triangle shows the relationship between speed (S), distance (D), and time (T).

Cover the letter you want, to get a formula for that letter.

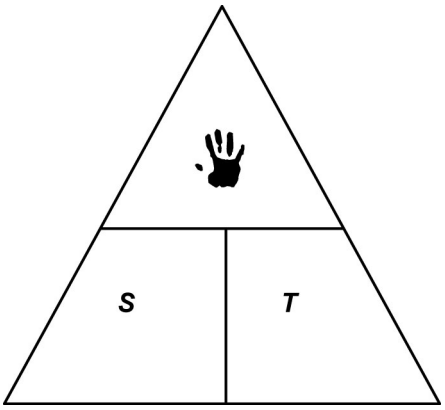
$$S = \frac{D}{T}$$



Example 1

If you drive 300 km and it takes 4 hours, your speed in km/hr is

$$S = \frac{D}{T}$$
$$= \frac{300}{4}$$
$$= 75$$



Example 2

A formula for distance (D) is

$$D = S \times T$$

So, if you drive at 80 km/h for 3 hours, the distance travelled is

$$D = S \times T$$
$$= 80 \times 3$$
$$= 240$$

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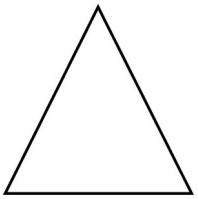
For each of the formulas below, construct a Terrific Triangle. Then, write the other formulas related to the first one.



1. The density of an object is given by $D = \frac{M}{V}$ where M is the mass (g) and V is the volume (cm^3).

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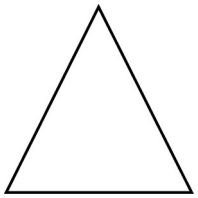

2. Ohm's Law of electricity states that the voltage V (volts) is related to the current I (amperes), and the resistance R (ohms) by the formula $V = IR$.

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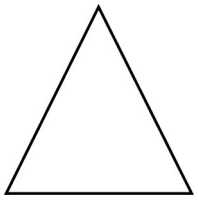

3. Actual distance D (km) on a map is given by $D = MS$ where M is the measure on the map and S is the scale of the map.

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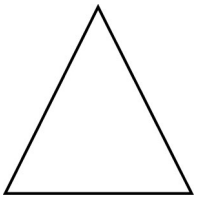

4. Interest I (\$) on an investment is given by $I = PRT$ where P (\$) is the amount invested, R (%) is the rate and T (yr) is the time.

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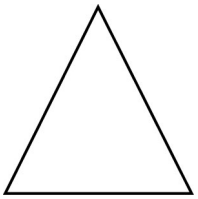

5. The area of a rectangle is $A = lw$.

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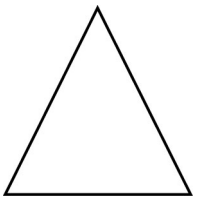

6. The volume of a rectangular prism is $V = lwh$.

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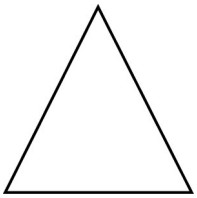

7. The area of a triangle is $A = 0.5bh$.

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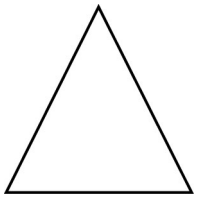

8. Sales tax T (\$) on a purchase is found from the formula $T = rP$ where r (%) is the sales tax rate and P (\$) is the purchase price.

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9. a) Use the density formula $D = \frac{M}{V}$ to complete the table:

Type of Wood	Mass (g)	Volume (cm^3)	Density (g/cm^3)
Pine	450	1216	
Oak	300		0.59
Teak		500	0.63
Balsa		1000	0.17
Ebony	500		1.12

b) The density of water is 1 g/cm^3. Does all wood float? Justify your answer.

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